

Appendix C – Cover Page
For eTech Ohio Teacher Planning grant application

University name: Capital University

Ohio Public Local Education Agency name:
Mark Twain Elementary (Westerville City Schools), Building IRN: 066811

Ohio Public Local Education Agency name:
Tallmadge Elementary (Lancaster City Schools), Building IRN: 036889

Ohio Public Local Education Agency name:
Medill Elementary (Lancaster City Schools), Building IRN: 024042

Ohio Public Local Education Agency name:
Winchester High (Canal Winchester Schools), Building IRN: 004770

Ohio Public Local Education Agency name:
Winchester Trail Elementary (Canal Winchester Schools), Building IRN: 145466

Ohio Public Local Education Agency name:
Indian Trail Elementary (Canal Winchester Schools), Building IRN: 136911

Ohio Public Local Education Agency name:
Liberty Union Elementary (Liberty Union-Thurston Local Schools), Building IRN: 020404

Primary contact name: Carolyn Osborne

Primary contact email: cosborn2@capital.edu

Primary contact phone: (614) 236-6262

Primary contact signature and title:  Education instructor

Vicki Moss, Principal, Mark Twain Elementary:
OR district representative on behalf:
Name and title: _____.

Signature: _____.

Signature: _____.

Brian Lawson, Principal, Tallmadge Elementary:
OR district representative on behalf:
Name and title: _____.

Signature: _____.

Signature: _____.

Sandra Svoboda, Principal, Medill Elementary:
OR district representative on behalf:
Name and title: _____.

Signature: _____.

Signature: _____.

Lynn Landis, Principal, Canal Winchester High:
OR district representative on behalf:
Name and title: _____.

Signature: _____.

Signature: _____.

Beverly Downing, Principal, Indian Trail Elementary:
OR district representative on behalf:
Name and title: _____.

Signature: _____.

Signature: _____.

William Whitlatch / Michael Brunning, Principal,
Winchester Trail Elementary:
OR district representative on behalf:
Name and title: _____.

Signature: _____.

Signature: _____.

Kelli Brownfield, Principal,
Liberty Union-Thurston Elementary:
OR district representative on behalf:
Paul Mathews, Superintendent

Signature: _____.

Signature: _____.

Ohio Public Local Education Agency name:

Mark Twain Elementary (Westerville City Schools), Building IRN: 066811

Primary contact name: Carolyn Osborne

Primary contact email: cosborn2@capital.edu

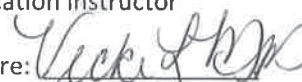
Primary contact phone: (614) 236-6262

Primary contact signature and title: _____, Education instructor

Vicki Moss, Principal, Mark Twain Elementary:

OR district representative on behalf:

Name and title: Vicki Moss
Principal

Signature: 

Signature: _____

Primary contact name: Carolyn Osborne

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Primary contact signature and title: _____, Education instructor

Brian Lawson, Principal, Tallmadge Elementary:

Signature: _____.

OR district representative on behalf:

Name and title: Kevin Snyder.

Signature: Kevin Snyder.

Director of Education Information and Technology

Sandra Svoboda, Principal, Medill Elementary:

Signature: _____.

OR district representative on behalf:

Name and title: Kevin Snyder.

Signature: Kevin Snyder.

Director of Educational Information and Technology

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Winchester High (Canal Winchester Schools), Building IRN: 004770

Ohio Public Local Education Agency name:

Winchester Trail Elementary (Canal Winchester Schools), Building IRN: 145466

Ohio Public Local Education Agency name:

Indian Trail Elementary (Canal Winchester Schools), Building IRN: 136911

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OR district representative on behalf:

Name and title: Janine Taylor
Director of Curriculum

Beverly Downing, Principal, Indian Trail Elementary:

OR district representative on behalf:

Name and title: Janine Taylor
Director of Curriculum

William Whitlatch / Michael Brunning, Principal,
Winchester Trail Elementary:

OR district representative on behalf:

Name and title: Janine Taylor
Director of Curriculum

Signature: SLH Asst. Principal

Signature: Janine Taylor

Signature: Beverly Downing

Signature: Janine Taylor

Signature: Michael Brunning

Signature: Janine Taylor

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University name: Capital University

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Liberty Union Elementary (Liberty Union-Thurston Local Schools), Building IRN: 020404

Primary contact name: Carolyn Osborne

Primary contact email: cosborn2@capital.edu

Primary contact phone: (614) 236-6262

Primary contact signature and title: _____, Education instructor

Kelli Brownfield, Principal,

Liberty Union-Thurston Elementary:

OR district representative on behalf:

Paul Mathews, Superintendent

Signature: Kelli Brownfield

Signature: Paul E. Mathews

Description of Program

In this section of the proposal, we describe the larger context of our proposed program. Following that, we present an overall purpose to the project and a set of measurable goals and objectives that will lead to the fulfillment of the purpose of this program. The relationship of the goals to the purpose and with each other is illustrated in a diagram and a matrix reveals the connections between the goals and RFP Outcomes, NCATE Standards. After the matrix is an explanation of strategies used in relation to each goal and its objectives. Finally, the Summary of Program Description demonstrates the connections between RFP requirements for the grant proposal and the ways in which the proposal meets those requirements.

Context

Analog and digital worlds

We live in the 21st century with many new tools that make more things possible than we can imagine. Using technology, the average person can create a multi-track recording, a printed, professional-looking journal or magazine, a doctored photograph, a movie, and 3-D animated video. Just 15 years ago each of these activities required equipment that the average person could not afford, operate, or house. The range of possible technologies available to the field of education has grown immense in a short period of time; at the same time, these new technologies are appealing to students because they allow students to do truly interesting projects. Students are likely to be much more interested in making a stop-animation video about a book they read than to write a book report.

Yet a lot of the education process still depends on a 19th century technology, the chalkboard and its fancier brother, the dry-erase board. While the chalkboard was probably engaging technology at the time it was introduced, it has lost much of its appeal in light of newer audio-visual equipment from the late twentieth century and ICT (Information and Communication Technology) from the 21st century. When learning is not engaging to students, they are likely to ignore it; conversely, when educational projects require students to learn information but to represent it using the many possibilities offered by ICT (and getting well beyond just using presentation software, which has lost much of its ability to engage), then they often go beyond the terms of the assignment to create something spectacular.

Unlike today's students who are considered to be "digital natives," using computer-based technology from a very early age, many of today's teachers and professors were born in a previous age and are having to adjust to the possibilities of the new paradigm. The differences between "digital" natives and "analog" natives is sizable because each has a different way of storing and using information as different concepts of how information can be shared. For example, analog people remember how copying a phonograph record onto a tape degraded the quality of sound. Digital people are used to retaining quality in every

iteration of their music. Analog people remember mimeographs. Digital people are used to being able to create information and share it widely almost instantaneously. Analog people didn't take a lot of pictures because film was expensive to buy and develop. Digital people take thousands of photos all the time and everywhere. These different possibilities govern thinking. Analog people's paradigm suggests that transmitting information is difficult which means they may be much less likely to use digital capabilities in this area. The digital capacities are not intuitive to people who live in the analog world. While the digital world was necessarily created by analog natives such as the early computer scientists from the 1950s, most "analog" natives have some degree of struggle when entering the digital world.

The analog/digital split has become extremely noticeable in the field of education. While there are analog natives in education who have learned how to manipulate the digital world (and to enjoy that process), there are also many people born in the analog world who are intimidated by the digital world, have little or no interest in learning how to operate in the new world, and who have little to no confidence in their own abilities to make that transition.

Yet these analog natives must teach digital natives. Sommers' (2011) report, "Education that Gets Results: Giving Taxpayers Their Money's Worth," points out the greater context of today's educational world:

Education is the key to personal prosperity, and our state's long-term success.

Education does not operate in a vacuum and must respond to an ever-changing world that includes:

- A globally competitive marketplace. Our children will compete globally for jobs and economic prosperity.
- Rising expectations for knowledge and skills. Advanced learning is the new normal for today's jobs. A good high school education isn't sufficient to prepare young people for competitive jobs in today's economy. Blue collar jobs require knowledge and skills that exceed our traditional expectations for entering college.
- Urgency for all students to succeed. If Ohio is to become competitive nationally and internationally, we must greatly increase the number of students who succeed. (p. 2)

Sommers then identifies using educational technology as one of five changes that need to be implemented in order to achieve the potential of education in Ohio.

The implications in relation to the analog/digital split are that all Ohio children need to learn

to use digital technology in order to succeed in the marketplace and that Ohio teachers must be able to use this technology effectively in the classroom to set up future marketplace success for students. Further, since any given classroom is likely to have several grades' worth of student levels, from students who are 2-3 levels below grade level, students who are basically at grade level, and students who are significantly advanced beyond grade level, teachers need to learn how to individualize instruction so that more students can succeed. One role of educational technology is that it provides ways for teachers to give each student education at his/her challenge level.

Funding challenges

While a lot of school technology was recently bought with stimulus dollars, the post-stimulus budget crunch means that when today's new technology becomes tomorrow's old technology, there may be little to no money to replace it. The tradition within most school systems is to buy proprietary hardware and software which can cost an enormous amount of money which leads to the idea that old technology cannot be replaced since that enormous amount of money is not available. As hardware breaks down and doesn't get fixed, technology in the classroom becomes more and more unreliable which makes it much harder for teachers to use. Rebooting a slow computer takes a lot of time away from a lesson and also puts the classroom at risk for becoming out of control.

There are forms of both hardware and software that can be affordable; many high quality software programs are free and have the type of license that allows them to be freely distributed and used. There are "workarounds" for hardware that take hardware from one source such as a video game system and apply it in an innovative way to create educational technology such as clicker systems (using smart phones).

Accessibility of Technology

The first step to increasing students' use of ICT is to make sure that the technology is actually available. Norris, C., Sullivan, T., Poirot, J., Soloway, E. (2003) point out that technology has little or no influence on student learning if students do not have access to it. While some classrooms are well-endowed with educational technology, even after the stimulus dollars some classrooms have a very small number of old computers and other classrooms allow computer access in computer labs for which teachers have to sign up in advance.

Another factor to consider in the accessibility of technology is that computer waste in landfills has become a significant concern because of the dangerous substances in computers and because computer parts are not bio-degradable. Many people are beginning to recycle computers through using Open Source operating systems and programs. With new light-

weight operating systems, old machines become not just usable, but fast, interesting, and engaging because of new possibilities. Donated recycled computers can add amazing new possibilities with technology. For example, Open Source programs are available not just on Windows and Macintosh operating systems; they are also available in many forms of Linux operating systems. The following chart compares proprietary software to equivalent Open Source software and demonstrates how Open Source software can expand the range of technology usage in the college classroom and the K-12 classroom, without costing money:

Proprietary Programs	Open Source Programs
Microsoft Office \$90-140	Open Office
Photoshop \$200-500	Gnu Image Manipulation Program
Windows 7 \$100	Linux
Adobe Premier \$500	Avidemux
	Blender
Adobe After Effects \$800	(http://www.youtube.com/watch?v=WruTNnF6Ztg is an example of 3d animation using Blender)
Adobe Illustrator \$500-\$600	Inkscape

Additionally, there are specialty Open Source programs for mathematics, science, and other forms of curricular content. Teachers will be able to add programs that will suit their classroom needs from a wide range of possibilities.

In addition to Open Source programs as resources, there are adaptations of technological items to create a version of expensive technology for a lot less money. For example, Johnny Chung Lee created an interactive whiteboard using a “wiimote” from the Wii game system and having the wiimote track infrared pens (which he shows how to make in his video); an example is shown here: <http://johnnylee.net/projects/wii/>. Assuming a classroom has a computer and an LCD projector, the rest of the equipment to create this interactive whiteboard costs less than \$100. This type of interactive whiteboard is not as good as the commercial ones; it is fussy to get it set up. The point of something like this is to get people thinking about old things in new ways.

Teachers

Numerous studies, e.g., Zhao, Y., Pugh, K., Sheldon, S., & Byers, J. (2002); Kleiman (2000); and Hernandez-Ramos, Pedro. (2005), have suggested that having computers available in classrooms does not mean that they are being used effectively (or at all) for student learning.

In fact the amount of technology in a classroom may far exceed a teacher's capacity to use. These studies suggest that not only technical knowledge but beliefs about teaching significantly influence if and how ICT is used in education.

The creators of the E-tech RFP acknowledge this through the focus on pre-service and in-service teachers' professional development. A number of issues must be covered in order to create effective university curricula for pre-service teachers and professional development for in-service teachers.

Teaching process. The first issue is the position of technology in the teaching process, the primary question being, when and how technology enhances learning. Technology can be effective when it brings to the classroom something that cannot be experienced directly. For example, there are simulations that allow people to do virtual open-heart surgery, an experience not available in K-12 classrooms for obvious reasons. This kind of simulation provides students with high level intellectual engagement through virtual "hands-on" activities and supports learning about body structures and functions. Another way brings something previously unavailable to K-12 students is through online courses which bring high level college preparatory classes to all schools (as pointed out in the report, Education that Gets Results, Sommers, 2011).

Technology is also effective when it provides students with more ways to represent their learning. Traditional means for representing learning such as tests, essays, book reports, term papers, and even Power Point presentations can be very un motivating. As mentioned above, it is now very easy to make videos and other media that can demonstrate learning in an authentic way. When students can represent their learning in creative ways, they are more likely to be engaged in the process.

Finally, technology is effective when it gives students opportunities to solve problems related to their own desire to do something. For example, a student might want to make a character in Alice (a 3D learning environment that simulates writing computer programs and creates animation) move forward or up a hill. The resulting animation may represent classroom learning related to why a character is moving up a hill; the process of creating it represents the critical skill of problem solving and also creates a foundation for more complex computer use.

Teaching philosophy. A second issue is teachers' perspectives about the teaching/learning relationship. Several of the above-cited research articles suggest that teachers with a constructivist philosophy tend to use technology more in teaching and to use it more

effectively than teachers with other kinds of philosophies. Since a lot of using technology is based on constructing one's own knowledge of what the technology can do and how to use it in one's own context, it makes sense that constructivist philosophy is more in line with the use of technology than other approaches to learning.

Philosophies are deeply held beliefs, so to have a goal of people changing their philosophies to accommodate ICT would be extremely difficult to completely impossible to achieve; it would also be demeaning and paternalistic for a university-led program to expect to change teachers in this way. Instead, those who are creating curricula and professional development will find ways that technology can enhance all types of learning activities in the framework of a wide range of philosophies.

Learning technology. A third issue related to teachers' adopting ICT in their classrooms is technical knowledge. Learning in classrooms tends to be defined and practiced as systematic, complete, accomplished step by step, mastery of a topic. This perspective on learning when applied to technology learning tends to make people feel overwhelmed. If it takes a week's worth of hours to master Microsoft Office, how much more will it take to learn Photoshop, 2 and 3d animation programs, music manuscript-writing programs, software that accompanies hardware such as Smart Notebook, and so forth? This feeling is completely demotivating and unnecessary because effective technology learning does not mean learning everything about a few select pieces of software or hardware only to find these things become obsolete in a matter of 2-3 years.

When people are able to learn enough of a software program to get it to be useful to them and their students, that is a sufficient amount of learning about that particular program. When people learn how to take templates created by other people (whether templates for text layout or templates for Java Script widgets) and plug them into their own projects, that is an effective level of being able to use technology. When people can download a new-to-them program and find ways of exploring what it can do, that level of technological proficiency will help them to use technology for teaching and learning. Technology learning is often unsystematic, which means that a lot of things can be learned quickly.

Teachers and peers. It is extremely difficult for one single teacher in a school building to get to the level of innovating in ICT use because the process of learning the software, figuring out how to use it in the classroom, and innovating with it requires a cognitive load that most individuals cannot sustain. However, a group of teachers of several different levels of proficiency can benefit everyone. The advanced users can teach less advanced users. The less advanced users can be social and professional support for the advanced users.

Time. The final issue is time. The best curriculum or professional development program is useless if it is too time consuming either for pre-service teachers or for practicing teachers.

Creators of technology development experiences should use asynchronous forms of teaching (e.g., online course work) as well as the creation of local peer groups within a single district or school so that synchronous learning fits into each person's schedule.

Characteristics of Program

The purpose of this proposed program is to improve K-12 learning in general and learning how to use ICT specifically by helping in-service and pre-service teachers to better understand and use ICT in their classrooms. In doing so, the program will create communities of practice that include people (whether pre-service teacher, in-service teacher, university faculty, school administrators) who are advanced technology users as well as people who are relatively new to technology. The communities of practice will help to determine the kinds of professional development that would be useful within local contexts; this professional development will be delivered or preserved (in the case of in-person professional development) so that all people in the project (pre-service and in-service teachers) can benefit from it whether or not they could physically attend.

In addition to these practices, the program will implement the use of no-cost software and other workarounds so that all classrooms will have access to continually-updated software at no cost to the school districts. All activities will be planned with the idea of how they might fit into teachers' lives, using asynchronous communication and learning via distance learning strategies to make information and ideas easily available.

Purpose, Goals, and Objectives of this Proposed Program

The goals and objectives of our proposed program reflect the context delineated above in relation to the goals of the E-tech Teacher Planning program, NETS goals, and NCATE technology goals. The following diagram illustrates the central purpose of the project and the five goals that will lead to the achievement of that purpose.



The central purpose of this project is to increase learning of K-12 students by 10% through the thoughtful and wise use of technology. That increase in learning will be measured through school-based assessments. As part of this purpose, K-12 students will be increasing their use of technology in learning.

The five goals of the project were created in order to successfully achieve the purpose of the project. Each goal and objective is given a shorthand name instead of a number (e.g., “Goal 1, Objective 1”) to avoid implying a particular hierarchy of goal and objective achievement that is not part of this proposed project.

Increase knowledge, willingness, and actual use of technology among pre-service and in-service teachers; our goal is that there will be a 25% increase in the use of technology among pre-service and in-service teachers. [the shorthand for this goal is “Knowledge”]

Objectives:

- Add technology instruction to Education 314 and 316 at Capital University
- Provide ten professional development workshops during the year
- Create communities of practice small groups organized by location
- Encourage peer support through communities of practice
- Teach effective skills for the adoption of technology
- Make information and ideas accessible through distance learning practices
- Creation of ePortfolios by all participants

Develop and increase critical thinking, creativity, problem solving, and innovation in the process of using technology among pre-service teachers, in-service teachers, and K-12 students; pre-service and in-service teachers’ ePortfolios will include at least 1 project that requires problem-solving for K-12 students as well as evidence of their own creative and innovative use of technology. [Innovation]

Objectives:

- Encourage, through the communities of practice, the sharing of innovations already being used and those that are developed during the course of the project.
- Provide computer hardware (e.g., used laptops) so that pre-service and in-service teachers can experience the process of putting Open Source operating systems and software on an actual computer as a means of developing problem solving skills.
- Demonstrate innovative uses of technology hardware such as the wiimote interactive whiteboard (an interactive whiteboard that uses a wiimote and infrared pens) in workshops and through distance learning.
- Use part of the workshops for “tinkering”--trying out possible innovations

- Help pre-service and in-service teachers develop lesson plans that involve K-12 students in creativity (e.g., new ways to demonstrate their learning) and problem-solving (figuring out something such as a scientific concept or getting a new technology to work). ePortfolios will contain at least one example of student work that reflects the creative use of ICT

Use technology to support communication and collaboration among pre-service teachers, in-service teachers, university faculty; our goal is that 75% of the teaching related to this project will be through distance learning. [Communication]

Objectives:

- Develop a public web space for recording of ideas, such as websites that are useful for teaching certain concepts and instructions for creating/utilizing technology in the classroom (distance learning)
- Use online conferencing technology (e.g., Big Blue Button) for communication among project participants
- Use a private course management system ("CMS," e.g., Moodle which is Open Source) for communication and the recording of information that cannot be shared on a public website (such as pictures of students in the classroom) (distance learning)
- Use group communication processes in the course management system (e.g., email to all participants or a subset of participants)
- Materials on the public web and on the CMS will reflect the pedagogy that we are trying to teach.

Develop strategies and knowledge to create and design learning environments and learning activities that address the full range of learners; each pre-service teacher and in-service teacher will demonstrate this understanding through at least one project in their ePortfolios. [Design]

Objectives

- Pre-service and in-service teachers place at least one project that reflects principles of instructional design in their ePortfolios
- In workshops, on the private and public websites, in Education 314/316, and in private conversations, present the principles of Universal Design for Learning (UDL)
- Provide information about Open Source adaptive software

- Pre-service and in-service teachers place at least one project that reflects principles of Universal Design for Learning in their ePortfolios.

Ensure that 100% of the use of technology in this project reflects proper digital citizenship and safety practices as well as each district's policies on the use of technology in the classroom.

- Present information to in-service and pre-service teachers about digital citizenship and safety practices
- Ensure that all projects and websites used in the program are compliant with each district's policy on technology
- Monitor public website to ensure that no private information gets posted
- Pre-service and in-service teachers will place at least one safety checklist in their ePortfolios

Matrix of Goals in Relation to RFP Outcomes, NCATE Standards, and NETS-t Indicators

The RFP states as one of the outcomes of the eTech program:

Align RFP goals with the International Society for Technology in Education (ISTE) recommendations for National Education Technology Standards for Teachers (NETS-T),

NCATE goals, especially as it relates to the use of technology in pre-service instruction, and to eTech Ohio's Five Year State Educational Technology Plan (2009) and the eTech Ohio Commission's Strategic Plan (2010). (RFP, p. 1)

The following matrix demonstrates how project goals are aligned with RFP outcomes, NCATE Standards, and NETS-t Performance Indicators:

Capital University eTech Teacher Planning Grant

Grant Goals	RFP Outcomes	NCATE Standards	NETS-t Indicators
Increase knowledge, willingness, and actual use of technology among pre-service and in-service teachers; our goal is that there will be a 25% increase in the use of technology among pre-service and in-service teachers.	Increase required coursework in educational technology and competency demonstrations for pre-service teachers in selected Ohio Colleges and Universities approved to grant degrees in education by the chancellor to further prepare them to teach in a 21st Century Classroom.	Standard 1-The Nature of Technology Standard 4-Abilities for a Technological World Standard 10- Professional Growth	Facilitate and Inspire Student Learning and Creativity Model Digital-Age Work and Learning Engage in Professional Growth and Leadership
Develop and increase critical thinking, creativity, problem solving, and innovation in the process of using technology among pre-service teachers, in-service teachers, and K-12 students; pre-service and in-service teachers' ePortfolios will include at least 1 project that requires problem-solving for K-12 students as well as evidence of their own creative and innovative use of technology.	Increase "innovation dissemination", collaboration and cooperation between pre-service students and practicing teachers during the placement requirement. Provide a systematic way of providing ongoing support and professional development for in-service teachers in the public LEAs.	Standard 1-The Nature of Technology Standard 3-Design Standard 4-Abilities for a Technological World Standard 10-Professional Growth	Facilitate and Inspire Student Learning and Creativity Model Digital-Age Work and Learning Engage in Professional Growth and Leadership
Use technology to support communication and collaboration among pre-service teachers, in-service teachers, university faculty; our goal is that 75% of the teaching related to this project will be through distance learning.	Increase "innovation dissemination", collaboration and cooperation between pre-service students and practicing teachers during the placement requirement. Provide a systematic way of providing ongoing support and professional development for in-service teachers in the public LEAs.	Standard 1-The Nature of Technology Standard 3-Design Standard 4-Abilities for a Technological World Standard 10-Professional Growth	Model Digital-Age Work and Learning Engage in Professional Growth and Leadership
In workshops, on the private and public websites, in Education 314/316, and in private conversations, present principles of effective instructional design; at least one project in each ePortfolio will represent these principles.	Provide a systematic way of providing ongoing support and professional development for in-service teachers in the public LEAs.	Standard 3-Design Standard 5-The Designed World Standard 6-Curriculum Standard 7-Instructional Strategies Standard 8-Learning Environment Standard 9-Students	Facilitate and Inspire Student Learning and Creativity Design and Develop Digital-Age Learning Experiences and Assessments
Ensure that 100% of the use of technology in this project reflects proper digital citizenship and safety practices as well as each district's policies on the use of technology in the classroom.		Standard 1-The Nature of Technology Standard 9-Students	Promote and Model Digital Citizenship and Responsibility

Strategies for Achieving Purpose and Goals

The central purpose of this project is to increase learning of K-12 students by 10% through the thoughtful and wise use of technology.

Evaluation: school and classroom-based assessments, ePortfolios of the teachers and pre-service teachers

Increase knowledge, willingness, and actual use of technology among pre-service and in-service teachers; our goal is that there will be a 25% increase in the use of technology among pre-service and in-service teachers.

Relation to purpose: K-12 student learning cannot be positively influenced by technology unless teachers have a knowledge of technology and a sense of self-efficacy in its use.

Evaluation: Pre- and Post-program survey (details on evaluations can be found in the "Program Evaluation" section)

Objectives

- Add technology instruction to Education 314 and 316 at Capital University

Development of curriculum for Education 314 and 316 (Junior Block Reading and Writing Methods) that extends students' technological prowess as measured by student projects. Learning will take place in the college classroom, in students' field placements, and via distance learning. The curriculum will focus on the skills teachers need in order to approach new technologies with a sense of self-efficacy, such as understanding how to find all the functions of a program using the mouse, understanding how to find information about the program on user forums and in documentation, and understanding that there are many ways to accomplish a goal and if one doesn't work, try another. Project work will allow all students to be challenged no matter their ability to use technology prior to taking these courses.

Evaluation: Curriculum, pre-service teachers' ePortfolios

- Provide ten professional development workshops during the year

These workshops will focus on technologies that are relevant to the particular classrooms represented in this project as well as technology-learning techniques, instructional design, and Universal Design for Learning. Even if pre-service and in-service teachers are not able to attend a workshop, its material and a video of the presentation will be available for distance learning. The workshop curriculum will focus on the skills teachers need in order to approach new technologies with a sense of self-efficacy, such as understanding how to find all the functions of a program using the mouse, understanding how to find information about the program on user forums and in documentation, and understanding that there are many ways to accomplish a goal and if one doesn't work, try another.

Evaluation: Workshop evaluations, Distance Learning materials on CMS, videos of workshops

- Create communities of practice small groups organized by location

A community of practice may be individual teachers in two schools in a district along with two or three pre-service teachers and Capital University Education faculty or some similar grouping. The purposes of the smaller groups include to ensure that local needs and conditions are addressed in the project and to facilitate the kind of problem-solving conversations that take place at the point of actually using the technology. The identity of the each smaller community and the larger whole will be forged by shared goals and commitment to bringing ICT to classrooms, through continued communication, exchange of ideas and experience. Access to and usage of compatible and replicated technology is an important aspect of building identity of the community.

Evaluation: Records of communication between Principle Investigators and pre-service and in-service teachers; records of communication between members of the communities of practice

- Encourage peer support through and within communities of practice

Where possible we will arrange for in-service teachers to visit each others' classrooms, particularly classrooms that are relatively close by in terms of physical location.

Capital University faculty will be a part of the visits and/or a part of discussions that follow the visit. The faculty can help in-service teachers recognize their own strengths and the strengths of their technology use. This will help all participants see each

others' strengths and therefore to help them learn to depend on each other for guidance.

The workshops will bring teachers together. Smaller groups can be facilitated within workshops through having an experiential section where these teachers work together on problem-solving and learning of some sort.

As a clearinghouse for the aggregate of information, Capital University faculty can refer in-service and pre-service teachers to each other because of a common interest.

Evaluation: Workshop records, records of communications, distance learning materials (CMS and public website)

- Teach effective skills for the adoption of technology

All contact between participants will focus on some aspect of: instructional design, Universal Design for Learning, problem solving around technology, and learning principles that can be applied to many specific situations (e.g., how drop down menus work across many different programs and operating systems).

In addition to formal teaching situations, participants in the various communities of practice can help each other figure out and make new technologies operational and useful.

Evaluation: Pre- and post program surveys, ePortfolios

- Make information and ideas accessible through distance learning practices

Distance learning practices include making a public web space for recording of ideas, such as websites that are useful for teaching certain concepts and instructions for creating/utilizing technology in the classroom and using a private course management system (CMS; e.g., Moodle which is Open Source) for communication and the recording of information that cannot be shared on a public website (such as pictures of students in the classroom) . Distance learning will also feature information in multiple forms (video, podcasts, written form, etc.) to accommodate all teachers' preferences for receiving information. Open Source adaptive software will be integrated where possible in order to accommodate pre-service and in-service teachers and also to

demonstrate how Universal Design for Learning principles can be integrated into instructional design.

Evaluation: public website, materials available on CMS

- Creation of ePortfolios by all participants

ePortfolios will consist of the projects and materials created by pre-service and in-service teachers during this proposed program. The portfolio itself may be as simple as a list of links to the actual projects and brief comments about how the projects meet goals set by this grant program. Because the development of the ePortfolio is made as simple as possible, in-service teachers will also be able to create ePortfolios which can be shared with one another and which will be a major piece of evidence regarding the effectiveness of this program.

Evaluation: ePortfolios

Develop and increase critical thinking, creativity, problem solving, and innovation in the process of using technology among pre-service teachers, in-service teachers, and K-12 students; pre-service and in-service teachers' ePortfolios will include at least 1 project that requires problem-solving for K-12 students as well as evidence of their own creative and innovative use of technology.

Relation to Purpose: K-12 students benefit from learning experiences that fit their learning needs and that spark their interest.

Evaluation: ePortfolios, materials on public website, materials on CMS, pre- and post-program surveys

Objectives

- Encourage, through the communities of practice, the sharing of innovations already being used and those that are developed during the course of the project.

Communities of practice will be developed and university faculty will model the process of sharing. Additionally as university faculty become aware of innovation

among K-12 students, pre-service teachers, and in-service teachers, they will prompt the sharing of that technology to the community at large and the smaller communities of practice.

Evaluation: Communications records

- Provide computer hardware (e.g., used laptops) so that pre-service and in-service teachers can experience the process of putting Open Source operating systems and software on an actual computer as a means of developing problem solving skills.

The experiential portion of the ten professional development workshops will provide opportunities for scaffolded problem solving in the process of installing and using Open Source operating systems and/or programs as well as websites and web apps.

This project will make use of donated computers to enhance existing classroom technology. Capital University Department of Information Technology will be donating some computers and we are looking to find corporate partners to join with this aspect of the project. Additionally, we are currently piloting putting new software on old computers that have been informally donated to Capital University faculty.

Evaluation: workshop records, workshop videos

- Demonstrate innovative uses of technology hardware such as the wiimote interactive whiteboard (an interactive whiteboard that uses a wiimote and infrared pens) in workshops and through distance learning.

Since the equipment to create the interactive whiteboard using wiimotes is already available (owned by a faculty member of Capital University), this technology will demonstrate how common items can be used in ways for which they were not constructed in order to create learning technologies. Along with this particular example, websites such as <http://instructables.com> will be shared; this type of website provides instructions for doing sophisticated things with unsophisticated equipment.

Not only does this website scaffold creating unusual things (such as a Stirling engine that uses a candle, a soda can, a balloon, and a few other household things), the experience of doing some of these projects can lead pre-service and in-service teachers into creating different innovative projects. The process of using Instructables and similar to support creativity and innovation has been used with Capital University's Education 214, Integrating the Arts in the Elementary Classroom and informally found

to be a successful way of teaching the thinking processes that lead to innovation and creativity.

Evaluation: Videos of workshops, public website, CMS materials

- Use part of the workshops for “tinkering”--trying out possible innovations

As mentioned above, part of each workshop will be experiential so that pre-service and in-service teachers can try out new things with the support of their peers and university faculty. Faculty and confident users will demonstrate how to tinker with software, such as how to turn a pdf into a graphics file, how to change a video from one file type to another, and finding several different ways of doing something such as adding information to a wiki.

Evaluation: Videos of workshops, public website, CMS materials

- Help pre-service and in-service teachers develop lesson plans that involve K-12 students in creativity (e.g., new ways to demonstrate their learning) and problem-solving (figuring out something such as a scientific concept or getting a new technology to work)

Workshops, communities of practice, and distance learning techniques will be the means by which pre-service and in-service teachers will have the support to integrate problem solving and creativity into their actual plans for teaching. Teachers who are less comfortable with using constructivist methods of instruction will be encouraged to require students to use innovative ways to represent their learning where appropriate (e.g., social studies presentations or book responses moving beyond power points). Teachers who have a more constructivist philosophy will be encouraged to provide students with opportunities to explore ideas and concepts using ICT, such as using math apps on a mobile device, using simulations such as running the Jamestown colony (<http://www.historyglobe.com/jamestown/>), and becoming involved in larger, challenging projects such as figuring out Blender.

Evaluation: ePortfolios, public website, CMS materials

Use technology to support communication and collaboration among pre-service teachers, in-service teachers, university faculty; our goal is that 75% of the teaching related to this project will be through distance learning

Relation to Purpose: K-12 students will learn better if their teachers have a supportive peer group in the process of technology being used for learning.

Evaluation: Communication records

- Develop a public web space for recording of ideas, such as websites that are useful for teaching certain concepts and instructions for creating/utilizing technology in the classroom (distance learning)

The public website, possibly housed on <http://wikispaces.com>, enhances communication because wiki pages have areas for discussion about the projects that are posted. These can become forums for problem-solving around technology and extending teaching ideas. Because of the public website, this material will be continue to be available (and can still be worked on) well beyond the grant program's ending date. An example of this kind of wiki, developed by Tobie Sanders and Carolyn Osborne (who will implement this grant program) can be found at: <http://literacymethods.wikispaces.com>.

Evaluation: Public website

- Use online conferencing technology (e.g., Big Blue Button) for communication among project participants

Online conferencing offers the advantages of being together in a meeting through being able to share written and visual ideas and avoids the problems of scheduling, transportation, parking, and so forth. With this kind of technology, pre-service teachers and some of the in-service teachers can “meet” during pre-service teachers’ class time. The in-service teachers can share classroom events and immediate plans and everyone can focus on helping each other move forward in the use of ICT in the classroom. Using an Open Source web application for this function means that in-service and pre-service teachers can use this technology later on without worry about cost.

Evaluation: Records of conferencing

- Use a private course management system (“CMS,” e.g., Moodle which is Open Source) for communication and the recording of information that cannot be shared on a public website (such as pictures of students in the classroom) (distance learning)

It is not appropriate to share many forms of information on a public website, such as pictures of children, names, concerns about particular children, ideas for addressing individual students’ needs, and so forth. A private course management system allows for more open communication between project participants.

Evaluation: CMS system materials and statistics

- Use group communication processes in the course management system (e.g., email to all participants or a subset of participants)

There are many ways to send messages to all participants or some subset of participants as necessary. Participants (pre-service teachers, in-service teachers, and university faculty) will be encouraged to use these means for communication with each other.

Evaluation: Record of program activities, examples of communication

Develop strategies and knowledge to create and design learning environments and learning activities that address the full range of learners; each pre-service teacher and in-service teacher will demonstrate this understanding through at least one project in their ePortfolios.

Relation to Purpose: Not only do students need access to technology, but they need well-designed learning experiences that suit their individual and corporate learning needs.

Evaluation: ePortfolios, public website, CMS

- Pre-service and in-service teachers place at least one project that reflects principles of instructional design in their ePortfolios

It is not enough to know how to use the technology in a classroom; teachers need to know how to use it effectively to support learning. Technology opens up a lot of possibilities in terms of how information is presented, how students learn, how to support individual needs, and how students represent their knowledge. The most impressive technology will be a waste of time unless teachers (pre- and in-) can create a learning context for it. Examples of participants' work that reflects principles of instructional design will be placed in their ePortfolios.

Evaluation: Workshop records, workshop videos, ePortfolios

- In workshops, on the private and public websites, in Education 314/316, and in private conversations, present the principles of Universal Design for Learning (UDL)

Principles of and resources for Universal Design for Learning will be taught and made available via all possible venues (in class learning, distance learning, etc.)

Evaluation: CMS, public website, ePortfolios

- Provide information about Open Source adaptive software

All in-service and pre-service teachers will be given access to and opportunities to experiment with Open Source software. Open Source will be part of the experiential aspects of some of the workshops.

Evaluation: Workshop records, CMS, public website

- Pre-service and in-service teachers place at least one project that reflects principles of Universal Design for Learning in their ePortfolios

Simply having multiple forms of the same information available for students is an example of UDL because all modes of learning are addressed (pace, format, etc.). This basic form of UDL can be easily supplemented with Open Source adaptive software such as Camera Mourse (<http://www.cameramouse.org/>) or widgets such as Vozme (<http://vozme.com/webmasters.php?lang=en>). Additionally, pre-service and in-service teachers can include specific adaptations for specific students in their classrooms.

Evaluation: Curriculum, workshop records, ePortfolios

Ensure that 100% of the use of technology in this project reflects proper digital citizenship and safety practices as well as each district's policies on the use of technology in the classroom.

Relation to Purpose: In order to learn, K-12 students need to be safe, first of all.

Evaluation: Public website, CMS, safety checklist

- Present information to in-service and pre-service teachers about digital citizenship and safety practices

All adult participants will be presented with information about both digital citizenship and safety practices. This will take place formally in workshops and the pre-service teaching curriculum as well as informally through small group and private communication between pre-service teachers, in-service teachers, and university faculty

Evaluation: Curriculum, workshop records, CMS, public website, records of communication

- Ensure that all projects and websites used in the program are compliant with each district's policy on technology

We will collect each district's policy statement and make these available through the course management system. From these and from the relevant NCATE and NETS standards, create a checklist that teachers can use on their projects before they allow K-12 students access to them.

Evaluation: actual policies from districts, curriculum, workshop records

- Monitor public website to ensure that no private information gets posted

Program managers from this grant will formally monitor the public website. Pre-service and in-service teachers will be encouraged to do this as well and to help each other in this matter.

Evaluation: records of monitoring public website

- Pre-service and in-service teachers will place at least one safety checklist in their ePortfolios

There will be evidence of adult participation in making sure that technology practices related to this grant program represent proper digital citizenship and safety for K-12 students.

Evaluation: ePortfolios

Summary of Program Description

The Program Description has necessarily been complex. By way of summary, RFP requirements for the Program Description are presented in a matrix along with the way in which that requirement has been met.

Requirement for proposal	Place in which requirement is met
Plans for increasing the K-12 students' use of ICT in the classroom.	<p>Goals:</p> <p>In workshops, on the private and public websites, in Education 314/316, and in private conversations, present principles of effective instructional design; at least one project in each ePortfolio will represent these principles.</p> <p>Increase knowledge, willingness, and actual use of technology among pre-service and in-service teachers; our goal is that there will be a 25% increase in the use of technology among pre-service and in-service teachers.</p> <p>Develop and increase critical thinking, creativity, problem solving, and innovation in the process of using technology among pre-service teachers, in-service teachers, and K-12 students; pre-service and in-service teachers' ePortfolios will include at least 1 project that requires problem-solving for K-12 students as well as evidence of their own creative and innovative use of technology.</p> <ul style="list-style-type: none">• Help pre-service and in-service teachers develop lesson plans that involve K-12 students in creativity (e.g., new ways to demonstrate their learning) and problem-solving (figuring out something such as a scientific concept or getting a new technology to work) [particularly helping teachers to use ICT in ways that are congruent with their philosophies].
Steps to ensure that curricula developed for pre-service teachers include sound pedagogical methods and support the student use of ICT in classrooms.	<p>Goal:</p> <p>Increase knowledge, willingness, and actual use of technology among pre-service and in-service teachers; our goal is that there will be a 25% increase in the use of technology among pre-service and in-service teachers.</p> <ul style="list-style-type: none">• Add technology instruction to Education 314 and 316 at Capital University
Sound evaluation criteria of the effectiveness of the curricula.	Program Evaluation
Strategies to develop partnerships and program development with the public LEA	Each strategy is discussed individually below
Development of student competency in the appropriate use/application of ICT that will be tracked, measured and required within the pre-service program.	<p>Goal:</p> <p>Increase knowledge, willingness, and actual use of technology among pre-service and in-service teachers; our goal is that there will be a 25% increase in the use of technology among pre-service and in-service teachers.</p> <p>Objective:</p> <ul style="list-style-type: none">• Add technology instruction to Education 314 and 316 at Capital University
Increase of communication between the public LEAs and college or university.	<p>Goals</p> <p>Increase knowledge, willingness, and actual use of technology among pre-service and in-service teachers; our goal is that there will be a 25% increase in the use of technology among pre-service and in-service teachers.</p> <p>Objectives:</p> <ul style="list-style-type: none">• Provide ten professional development workshops during the year• Create communities of practice small groups organized by location

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	<p>Use technology to support communication and collaboration among pre-service teachers, in-service teachers, university faculty; our goal is that 75% of the teaching related to this project will be through distance learning.</p> <p>Goals</p> <p>Increase knowledge, willingness, and actual use of technology among pre-service and in-service teachers; our goal is that there will be a 25% increase in the use of technology among pre-service and in-service teachers.</p> <p>Objectives:</p> <ul style="list-style-type: none">• Provide ten professional development workshops during the year• Create communities of practice small groups organized by location
Involvement of practicing teachers and administrators.	<p>Goals</p> <p>Increase knowledge, willingness, and actual use of technology among pre-service and in-service teachers; our goal is that there will be a 25% increase in the use of technology among pre-service and in-service teachers.</p> <p>Objectives:</p> <ul style="list-style-type: none">• Create communities of practice small groups organized by location
Development of communities of practice.	<p>Goals</p> <p>Increase knowledge, willingness, and actual use of technology among pre-service and in-service teachers; our goal is that there will be a 25% increase in the use of technology among pre-service and in-service teachers.</p> <p>Objectives:</p> <ul style="list-style-type: none">• Create communities of practice small groups organized by location
Creation of any necessary professional development for teachers and instruction for students.	<p>Goals</p> <p>Increase knowledge, willingness, and actual use of technology among pre-service and in-service teachers; our goal is that there will be a 25% increase in the use of technology among pre-service and in-service teachers.</p>
	<p>Develop and increase critical thinking, creativity, problem solving, and innovation in the process of using technology among pre-service teachers, in-service teachers, and K-12 students; pre-service and in-service teachers' ePortfolios will include at least 1 project that requires problem-solving for K-12 students as well as evidence of their own creative and innovative use of technology.</p>
	<p>Ensure that 100% of the use of technology in this project reflects proper digital citizenship and safety practices as well as each district's policies on the use of technology in the classroom.</p>
Preparation of pre-service teachers to use ICT in classrooms to benefit students.	<p>Goal</p> <p>Increase knowledge, willingness, and actual use of technology among pre-service and in-service teachers; our goal is that there will be a 25% increase in the use of technology among pre-service and in-service teachers.</p> <p>Objective:</p> <ul style="list-style-type: none">• Add technology instruction to Education 314 and 316 at Capital University
Development of practicing teachers to improve and innovate with the use of ICT for students.	<p>Goal</p> <p>Increase knowledge, willingness, and actual use of technology among pre-service and in-service teachers; our goal is that there will be a 25% increase in the use of technology among pre-service and in-service teachers.</p> <p>Objectives:</p> <ul style="list-style-type: none">• Provide ten professional development workshops during the year• Create communities of practice small groups organized by location
Articulation of ICT competency expectations to pre-service teachers.	<p>Goal</p> <p>Increase knowledge, willingness, and actual use of technology among pre-service and in-service teachers; our goal is that there will be a 25% increase in the use of technology among pre-service and in-service teachers.</p> <p>Objective:</p> <ul style="list-style-type: none">• Add technology instruction to Education 314 and 316 at Capital University

Creation of a baseline data collection of ICT use in the classrooms and technology available.

Program Evaluation (pre- and post- survey administered at the beginning of the grant period and at the end of it)

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Capacity to Implement

Capacity of Capital University to successfully implement this grant:

Capital University has enjoyed grants of varying levels of complexity. We have received grants that:

1. Internally cross multiple disciplines/schools/faculty.
2. Require Capital to be a sub-contractor
3. Require Capital to employ sub-contractors
4. Require Capital to employ multiple vendors.
5. Include collaboration with multiple Universities around the country.
6. Include collaboration and coordination of multiple contracts with both Universities and individual faculty members.
7. Require Capital to serve as the responsible fiduciary party.

Two examples demonstrate our ability to serve in a variety of capacities for complex grants.

1. TQP – U. S. Department of Education.

We were part of a multi-university grant working in conjunction with the Columbus City Schools. Members of the Higher Education Partnership collaborated on this \$9 million grant to educate our students to teach STEM subjects within the CCS. Students were provided with scholarship money in exchange for a teaching commitment in an urban setting in the STEM subjects in middle schools. The Ohio State University, Columbus State University, Otterbein and Ohio Dominican University were all partners in this grant. The grant period has just concluded and we are closing out this grant.

2. National Science Foundation Grant in Computational Studies.

There are more than 17 institutions across the country participating in this grant. At those institutions more than 35 faculty members are writing Modules using the computational sciences. When the grant is concluded they will have written more than 65 modules to be used as part of a computational sciences curriculum that can be accessed by faculty all over the country. Capital is the fiduciary agent for this grant.

Needless to say, we receive grants of all sizes and for all types of projects. We maintain a Grants Administration office working under the guidance of the Provost of the University.

The current Grants Administrator is Pat Cramer, Assistant Vice President, External Relations.

As with each and every grant received at the university an account is established to ensure funds are utilized only for the purposes of this grant. There is a process in place that mandates how expenditures are made allowing for the appropriate signatures depending on the level of expenditure.

Those involved in the administration of this grant include:

Pat Cramer, Assistant Vice President, External Relations- 8 years with the University having come from an industry background in Columbus, Ohio.

Paul Miller, University Controller, University employee for 28.5 years.

PI's – Education Faculty – Dr. Carolyn Osborne and Dr. Tobie Sanders. Each of these faculty members are long term employees of Capital University and distinguished in the field of Education.

Single Point of Contact – to be established with each of the collaborating school districts.

Capacity of Primary Investigators (Tobie Sanders and Carolyn Osborne) to implement this grant:

Tobie Sanders

This year I successfully submitted and conducted two grant projects. I served as principal investigator and managed the projects. One grant, in the amount of \$16,000 was from the Martha Holden Jennings Foundation and created the Central Ohio Early Childhood Consortium for the purposed of professional development around S.T.E.M. curricula for young children. This grant was a partnership with two universities, a community college and a variety of early childhood education programs. The second grant, in the amount of \$27,000 was awarded by the Ingram White Castle foundation for the funding of an Intensive Summer Transition to Kindergarten program. Additionally, I participated in writing and conducting two successful S.T.E.M. grants with the Reynoldsburg City School District and have conducted assessment of literacy intervention studies in partnership with Groveport Madison Schools, Whitehall City Schools, and the Columbus City School system.

Carolyn Osborne

- Developed and implemented many grant-based projects at New Beginnings Shelter for Battered Women, Newark, Ohio, such as developing a Legal Advocacy program and a Volunteer Coordination program.
- Has a masters degree in Counseling Education and significant experience using those skills.
- Involved in various forms of teaching for over 30 years (music teaching and college teaching)
- Innovated in teaching such as creating the Gahanna Lincoln High School Fiddlers and a "School of Bluegrass"
- Used computer technology for over 25 years
- Currently problem-solving technology issues for colleagues in the Department of Education at Capital University
- Currently setting up ways of teaching ICT technologies to colleagues in the Department of Education at Capital University
- Currently finding innovative ways of using ICT such as using a wiki instead of a textbook for several courses, using Open Source software, and tinkering with alternatives to proprietary hardware and software.
- Was one of the first people to teach online classes at Capital University

Public LEA Involvement

One of the most interesting aspects of this project is the opportunities for people of various positions in education (in-service teachers, pre-service teachers, university faculty) to collaborate on using and innovating with ICT in the process of teaching K-12 students.

Too often reform in public schools comes down from “on high” and is mandated by authority, whether teachers like it or not. This process is necessary for the dissemination of legally mandated reforms such as state benchmarks and indicators, but in areas where teachers should have professional discretion, this process necessarily creates resistance.

People who are uncomfortable around technology have psychological barriers to overcome in order to learn. Avoiding teaching processes that lead to resistance is paramount to helping people overcome other fears.

Educators who are advanced in their use of technology want more challenges and not just another set of workshops on how to use a mouse or the like. These people are likely to become resistant when materials available to them are too easy.

This proposed program will try to avoid keeping resistance from developing or, when it does, address the needs of the resistant person in a respectful and helpful way, such as problem-solving around their specific classroom needs. Here are some of the strategies that will be used:

- Because the project has a strong emphasis on distance learning and on-line communication, materials presented can address a wide range of learning needs from the technological “newbie” to the highly advanced ICT user.
- Because every improvement is something to celebrate, they will all be celebrated whether it is someone trying something independently for the first time or someone else has written a program in Python.
- Highly skilled users of ICT will be considered as resources for other project participants, if they would like that role.

- Because teachers do not have a lot of time to spare, their time will not be wasted. Workshops will be designed for maximal learning, including as many “hands-on” type activities as possible. Any material that might look like it needs a lecture to get it across will be placed on the CMS or the public website so that no time is wasted in an inefficient and unengaging form of teaching.
- Workshops will be as organized as possible in terms of having materials available and easily accessible for participants.
- To lead is to be of service; therefore the role of the Principal Investigators is to ensure that in-service and pre-service teachers get their individual learning needs met and as many of their ICT-related problems solved as possible.
- The Principal Investigators will consistently communicate their high respect for and caring about all who are involved in the project.
- Participant feedback will be welcomed and encouraged and will lead to consistent improvements in the program through out the project's time.
- Public school personnel will be able to invite others into the project in terms of gaining access to materials on the CMS and the public website.
- Communication will be supported so that participants feel that it is worth their time to communicate. This support includes timely responses, acknowledgment of concerns, celebrations of success, sharing strategies from other participants, and so forth.

To sum it up, this program will be based on respect for all participants and the desire to meet their learning and problem-solving needs.

Timelines and Project Plan

A diagram of the time line and deliverables begins the next page. It is followed by a matrix that relations project activities to the purpose, goals, and objectives of the proposed program.

Summer, 2011

Deliverables

Program plan

Curriculum for pre-service teachers

List of workshops times, dates, and places

Collection of policies to help with creating safety checklist

Pre and post survey
Safety checklist

Summary of CMS materials

The website itself

Assessment data from classrooms, schools, and districts

- Invite each district's teachers and administrators to be part of summer planning

- Plan curriculum for Education 314/316

- Plan workshop technicalities

- Obtain each district's technology policies

- Create surveys and checklists

- Set up Course Management System

- Set up Public Website

- Set up possible structures for communities of practice

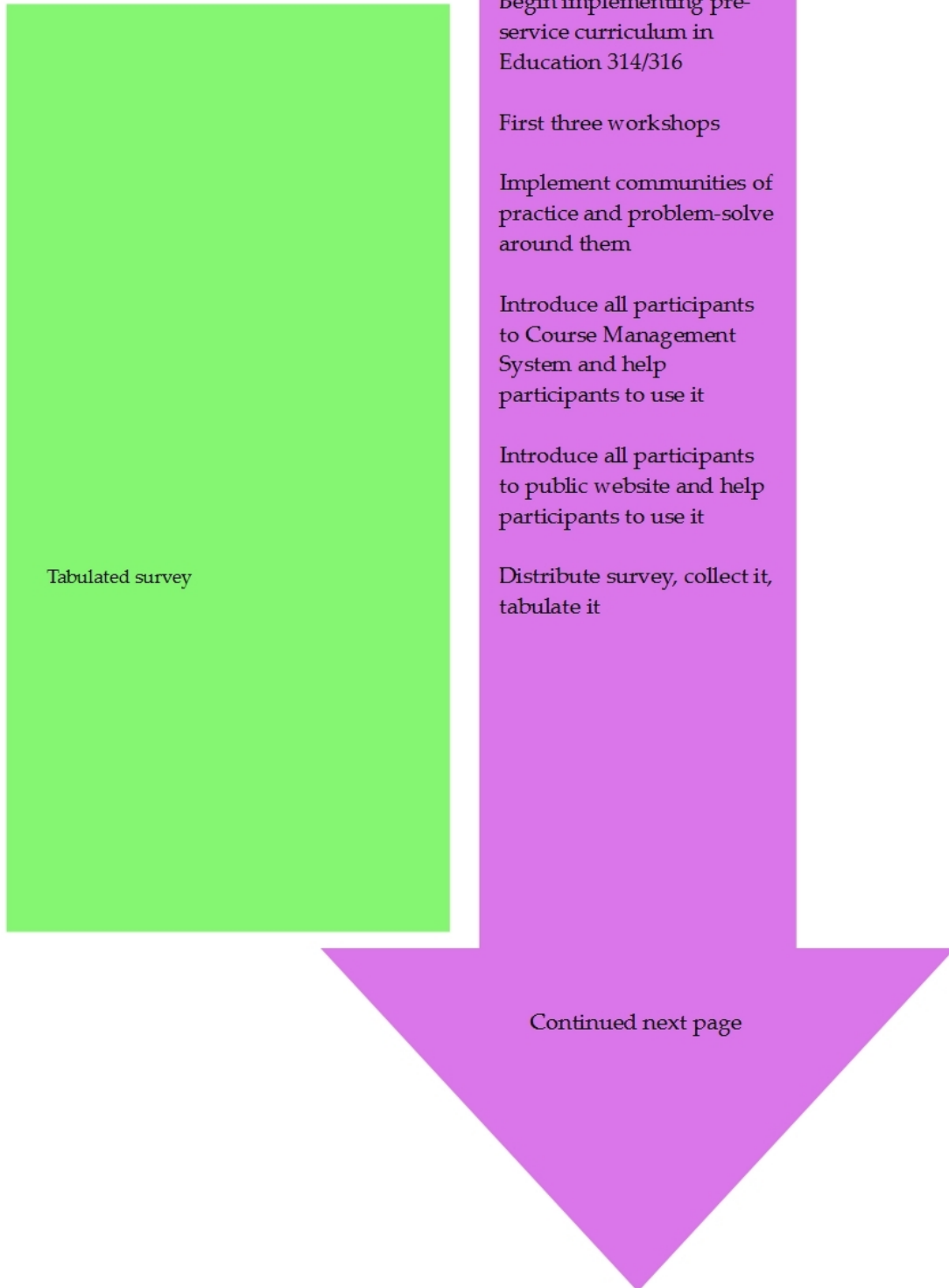
- Communicate with district personnel about all facets of the grant and the various set-ups

- Elicit feedback regarding set ups

- Obtain assessment data on students from each district/school/classroom

Continued next page

Fall Semester, 2011



Fall, 2011, continued

ePortfolio information

- Ed 314/316 pre-service teachers and in-service teachers in communication with one another

- Visits between Cap and classrooms and also between classrooms

- Present info and examples of ePortfolios to all participants

- Ongoing problem solving and addressing individual and communities of practice concerns

December, 2011

Tabulated post-project surveys

Eportfolios

Midterm report

- Collect post-project surveys from fall semester Cap students

- Collect ePortfolios from fall semester Cap students

- Analyze data from fall

- Write midterm report

- Plan Spring Semester implementation with Education 314/316

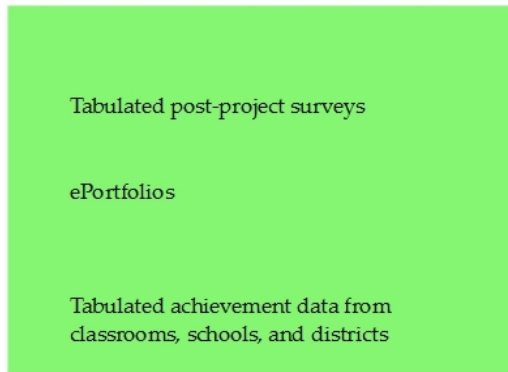
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Spring Semester, 2012



- Same as Fall Semester

May, 2011



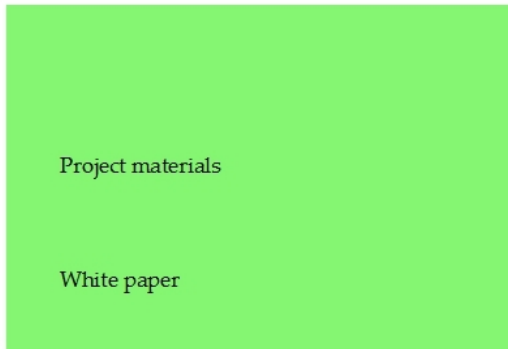
Tabulated post-project surveys

ePortfolios

Tabulated achievement data from
classrooms, schools, and districts

- Last workshop
- In-service teachers take
post-survey
- In-service teachers turn in
their ePortfolios
- Gather achievement data
from district/ school/
classroom

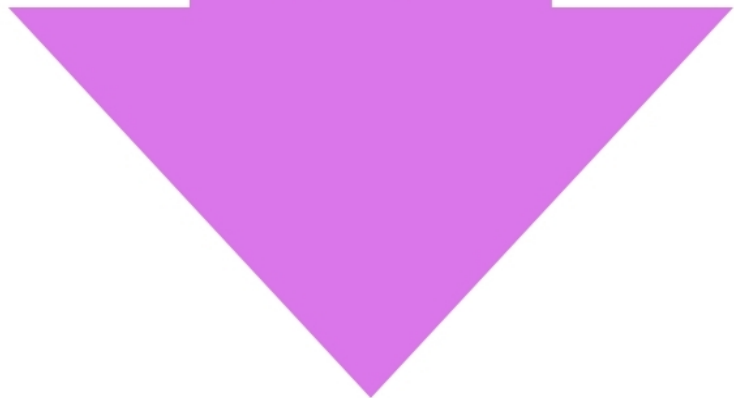
Summer, 2012



Project materials

White paper

- Analysis of all data
- Gathering and
organization of all relevant
materials to share with
eTech agency
- Write White Paper



The following matrix reveals the temporal connections between the purpose, goals, and objectives and the activities of the grant proposal:

	Purpose	Knowledge	Innovation	Communication	Design	Safety
Summer 2011	<p>Invite each district's teachers and administrators to be part of summer planning</p> <p>Obtain assessment data on students from each district/ school/ classroom</p>	<p>Plan curriculum for Education 314/316</p> <p>Plan workshop technicalities</p> <p>Create surveys and checklists</p> <p>Set up Course Management System</p> <p>Set up Public Website</p>	<p>Plan curriculum for Education 314/316</p> <p>Plan workshop technicalities</p> <p>Create surveys and checklists</p> <p>Set up Course Management System</p> <p>Set up Public Website</p>	<p>Plan curriculum for Education 314/316</p> <p>Plan workshop technicalities</p> <p>Set up Course Management System</p> <p>Set up Public Website</p> <p>Set up possible structures for communities of practice</p> <p>Communicate with district personnel about all facets of the grant and the various set-ups</p> <p>Elicit feedback regarding set ups</p>	<p>Plan curriculum for Education 314/316</p> <p>Plan workshop technicalities</p> <p>Set up Course Management System</p> <p>Set up Public Website</p>	<p>Plan curriculum for Education 314/316</p> <p>Plan workshop technicalities</p> <p>Obtain each district's technology policies</p> <p>Set up Course Management System</p> <p>Set up Public Website</p>
Fall semester, 2011	<p>Distribute survey, collect it, tabulate it</p> <p>Present info and examples of ePortfolios to all participants</p>	<p>Begin implementing pre-service curriculum in Education 314/316</p> <p>First three workshops</p> <p>Introduce all participants to Course Management System and help participants to use it</p> <p>Introduce all participants to public website</p>	<p>Begin implementing pre-service curriculum in Education 314/316</p> <p>First three workshops</p> <p>Introduce all participants to Course Management System and help participants to use it</p> <p>Introduce all participants to public website</p>	<p>Begin implementing pre-service curriculum in Education 314/316</p> <p>First three workshops</p> <p>Implement communities of practice and problem-solve around them</p> <p>Introduce all participants to Course Management System and help</p>	<p>Begin implementing pre-service curriculum in Education 314/316</p> <p>First three workshops</p> <p>Introduce all participants to Course Management System and help participants to use it</p> <p>Introduce all participants to public website</p>	<p>Begin implementing pre-service curriculum in Education 314/316</p> <p>First three workshops</p> <p>Introduce all participants to Course Management System and help participants to use it</p> <p>Introduce all participants to public website</p>

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		and help participants to use it Visits between Cap and classrooms and also between classrooms	and help participants to use it Visits between Cap and classrooms and also between classrooms	participants to use it Introduce all participants to public website and help participants to use it Ed 314/316 pre-service teachers and in-service teachers in communication with one another Visits between Cap and classrooms and also between classrooms Ongoing problem solving and addressing individual and communities of practice concerns	and help participants to use it Visits between Cap and classrooms and also between classrooms	and help participants to use it
December 2011	Collect post-project surveys from fall semester Cap students Collect ePortfolios from fall semester Cap students Analyze data from fall Write midterm report	Plan Spring Semester implementation with Education 314/316	Plan Spring Semester implementation with Education 314/316	Plan Spring Semester implementation with Education 314/316	Plan Spring Semester implementation with Education 314/316	Plan Spring Semester implementation with Education 314/316
Spring semester, 2011 Pre-service teachers new; in-service teachers the same as previous semester	Distribute survey, collect it, tabulate it Present info and examples of ePortfolios to all participants	Begin implementing pre-service curriculum in Education 314/316 First three workshops Introduce all participants to	Begin implementing pre-service curriculum in Education 314/316 First three workshops Introduce all participants to	Begin implementing pre-service curriculum in Education 314/316 First three workshops Implement communities of	Begin implementing pre-service curriculum in Education 314/316 First three workshops Introduce all participants to	Begin implementing pre-service curriculum in Education 314/316 First three workshops Introduce all participants to

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		<p>Course Management System and help participants to use it</p> <p>Introduce all participants to public website and help participants to use it</p> <p>Visits between Cap and classrooms and also between classrooms</p>	<p>Course Management System and help participants to use it</p> <p>Introduce all participants to public website and help participants to use it</p> <p>Visits between Cap and classrooms and also between classrooms</p>	<p>practice and problem-solve around them</p> <p>Introduce all participants to Course Management System and help participants to use it</p> <p>Introduce all participants to public website and help participants to use it</p> <p>Ed 314/316 pre-service teachers and in-service teachers in communication with one another</p> <p>Visits between Cap and classrooms and also between classrooms</p> <p>Ongoing problem solving and addressing individual and communities of practice concerns</p>	<p>Course Management System and help participants to use it</p> <p>Introduce all participants to public website and help participants to use it</p> <p>Visits between Cap and classrooms and also between classrooms</p>	<p>Course Management System and help participants to use it</p> <p>Introduce all participants to public website and help participants to use it</p>
May, 2012	<p>In-service teachers take post-survey</p> <p>In-service teachers turn in their ePortfolios</p> <p>Gather achievement data from district/ school/ classroom</p>	Last workshop	Last workshop	Last workshop	Last workshop	Last workshop
Summer 2012	<p>Analysis of all data</p> <p>Gather and organize all relevant materials</p>					

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	to share with eTech agency					
	Write White Paper					

Program Evaluation

Types of Assessments

The following types of assessments will be used in this project:

Classroom visits: pre-service research assistants will be required as part of their job to do classroom visits and to keep records of what they have observed. They will also be part of the problem-solving process should teachers have a struggle with some aspect of ICT. Principal Investigators will also make visits to support in-service teachers.

CMS statistics: statistics downloaded from Course Management System.

Curriculum: this refers to plans made to increase teaching about technology in Education 314/316 at Capital University.

District policies on technology: these will be gathered and retained in the process of creating the safety checklist.

District, school, and classroom-based assessments: standardized achievement data, assessments common to the entire school, and relevant classroom-based assessments (such as reading achievement).

ePortfolios: electronic that are created by pre-service and in-service teachers.

Materials on CMS: these are learning-related materials placed on the project's Course Management System for the purpose of participants gaining access to them asynchronously; these materials will be presented using distance learning strategies. All materials that are placed on the CMS that are not confidential by reason of district policy will be downloaded and shared with eTech following the completion of the program.

Pre- and Post-program survey: survey administered to all pre-service and in-service teachers participating in this proposed program. The pre-program survey will be administered at the beginning of the fall semester. Fall semester pre-service teachers will fill out the post-program survey at the end of fall semester. The pre-program survey will be administered at the beginning of the spring semester and at the end of the semester to pre-service teachers. In-service teachers will fill out the post-program survey in May, 2012

Project records: information recorded about project-related events

Public website: a website that is accessible by the public and which has information on it that complies with safety and digital citizenship standards. This website will continue to be available even after the grant project's time is ended.

Records of communication: this is all recorded instances of communication between principle investigators, in-service teachers, pre-service teachers, district personnel, communities of practice, and so forth. The recordings may be through retention of email, transcripts of instant message conversations, messages on the discussion areas of the CMS, and messages on the discussion area of the public website

Records of conferencing: conferencing web apps/software records of conferences.

Records of monitoring public website: review of the public website will take place often and records will be kept of these reviews.

Safety checklist: a grant project checklist of safety characteristics; the list will be based on NETS-t and NCATE standards as well as each district's specific guidelines. This assessment will help pre-service and in-service teachers to review their specific technological projects in relation to issues of K-12 student safety.

Videos of workshops: videos will be taken of all workshops as part of the workshop evaluation strategy and also as a part of making information available to participants on the Course Management System via distance learning.

Workshop evaluations: following each workshop, participants will fill out evaluations so the workshop program can be constantly monitored for effectiveness.

Workshop records: agendas, notes, and other workshop materials from each professional development workshop.

Data Analysis

Both quantitative and qualitative data will be collected and analyzed. Quantitative data can provide information about such things as how often something occurred or the numerical change in performance. Numbers of this type can be analyzed statistically to reveal patterns and relationships.

Qualitative data, non-numerical data, will be systematically examined and sorted. This type of data can get at the reasons various things happened. Qualitative data can be critical to figuring out why something is happening and it can also be helpful in considering the alterations that might be made to a program.

The following two charts delineated how the general purpose of the project and its goals will be evaluated in relation to the success of this program.

Purpose

The central purpose of this project is to increase learning of K-12 students by 10% through the thoughtful and wise use of technology.

Evaluation

School-based assessments at the beginning and end of the school year (such as results of state-mandated assessments, classroom assessments) ePortfolios
Classroom visits, in particular to gather information on K-12 students' use of ICT

Goals	Objectives	Evaluations
Increase knowledge, willingness, and actual use of technology among pre-service and in-service teachers; our goal is that there will be a 25% increase in the use of technology among pre-service and in-service teachers.		Pre- and Post-program survey
	Add technology instruction to Education 314 and 316 at Capital University	Curriculum Pre-service teachers' ePortfolios
	Provide ten professional development workshops during the year	Workshop videos Workshop evaluations Materials on CMS
	Create communities of practice small groups organized by location	Records of communications
	Encourage peer support through and within communities of practice	Workshop records Records of communications Materials on CMS
	Teach effective skills for the adoption of technology	Pre- and Post-program survey ePortfolios
	Make information and ideas accessible through distance learning practices	Public website Materials on CMS
	Creation of ePortfolios by all participants	ePortfolios
Develop and increase critical thinking, creativity, problem solving, and innovation in the process of using technology among pre-service teachers, in-service teachers, and K-12 students; pre-service and in-service teachers' ePortfolios will include at least 1 project that requires problem-solving for K-12 students as well as evidence of their own creative and innovative use of technology.		Pre- and post-program surveys Public website Materials on CMS ePortfolios
	Encourage, through the communities of practice, the sharing of innovations already being used and those that are developed during the course of the project.	Records of communications

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	Provide computer hardware (e.g., used laptops) so that pre-service and in-service teachers can experience the process of putting Open Source operating systems and software on an actual computer as a means of developing problem solving skills.	Workshop records Videos of workshops
	Demonstrate innovative uses of technology hardware such as the wiimote interactive whiteboard (an interactive whiteboard that uses a wiimote and infrared pens) in workshops and through distance learning.	Videos of workshops CMS materials Public website
	Use part of the workshops for “tinkering” -- trying out possible innovations	Videos of workshops CMS materials Public website
	Help pre-service and in-service teachers develop lesson plans that involve K-12 students in creativity (e.g., new ways to demonstrate their learning) and problem-solving (figuring out something such as a scientific concept or getting a new technology to work).	Records of communications Classroom visits
Use technology to support communication and collaboration among pre-service teachers, in-service teachers, university faculty; our goal is that 75% of the teaching related to this project will be through distance learning.		Records of communications
	Develop a public web space for recording of ideas, such as websites that are useful for teaching certain concepts and instructions for creating/utilizing technology in the classroom (distance learning)	Public website
	Use online conferencing technology (e.g., Big Blue Button, http://bigbluebutton.org/overview) for communication among project participants	Records of conferences
	Use a private course management system (e.g., Moodle which is Open Source) for communication and the recording of information that cannot be shared on a public website (such as pictures of students in the classroom)	Materials on CMS CMS statistics
	Use group communication processes such as email within a course management system or online group (such as Google Groups).	Records of communications
Develop strategies and knowledge to create and design learning environments and learning activities that address the full		Public website Materials on CMS ePortfolios

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range of learners; each pre-service teacher and in-service teacher will demonstrate this understanding through at least one project in their ePortfolios.		Classroom visits
	Pre-service and in-service teachers place at least one project that reflects principles of instructional design in their ePortfolios.	Eportfolios
	In workshops, on the private and public websites, in Education 314/316, and in private conversations, present the principles of Universal Design for Learning	Public website Materials on CMS Curriculum Workshop records Records of communications
	Provide information about Open Source adaptive software	Public website Materials on CMS Curriculum Workshop records Records of communications
	Pre-service and in-service teachers place at least one project that reflects principles of Universal Design for Learning in their ePortfolios.	Eportfolios
Ensure that 100% of the use of technology in this project reflects proper digital citizenship and safety practices as well as each district's policies on the use of technology in the classroom.		Materials on CMS Public website Safety checklist
	Present information to in-service and pre-service teachers about digital citizenship and safety practices	Public website Materials on CMS Curriculum Workshop records Records of communications Safety checklist
	Ensure that all projects and websites used in the program are compliant with each district's policy on technology	Public website Materials on CMS Curriculum Workshop records Records of communications Safety checklist
	Monitor public website to ensure that no private information gets posted	Records of monitoring
	Pre-service and in-service teachers will place at least one safety checklist in their ePortfolios	ePortfolios

Financial

Budget Narrative

Personnel

It is the philosophy of the Principal Investigators that every person's contribution to the proposed eTech project is equally valuable. Therefore, all personnel will be paid at the same hourly rate.

Faculty. Faculty roles include setting up the project materials (e.g., website, CMS, workshops, communications); administering the project during the school year; program evaluation; collating, tabulating and analyzing data; collecting materials used during the project timeframe; and writing the White Paper. Faculty stipends include salary, tax, and benefits.

Pre-service teacher research assistants. Beyond meeting their course and fieldwork requirements, pre-service research assistants will be collecting and analyzing data, visiting in-service teachers' classrooms, trouble-shooting technology, consulting with faculty about how the project is working and how it might be improved, traveling to classrooms and workshops, and assisting with the writing of the White Paper. The number of pre-service teacher research assistants reflects the Principal Investigators' desire to provide as many different students as possible with this activity.

In-service teacher research assistants. Along with their regular duties as professional teachers, in-service teacher research assistants will be collecting and analyzing data, sharing information with their colleagues, troubleshooting technology, creating an ePortfolio, traveling to other classrooms and workshops, and being part of workshops and distance learning efforts as contributors and learners.

Professional Development

Professional Development workshops will need to be assembled based on the curriculum for these workshops, current needs of in-service and pre-service teachers, and current learning needs of K-12 students. These workshops will also require handouts and various technological consumables such as blank disks for software, media, and information.

Technology

As of this writing, we are doing a survey to find out what technology is available within school systems and our university. Final decisions about what will be bought are contingent upon that survey data. The amounts in the budget reflect the types of technologies that will be purchased, an estimate of the numbers of each type, and the resulting total cost for each line item.

Mobile devices such as the Droid tablet or the Apple iPad are not currently widely available in schools and at our university; the number proposed reflects the desire to make this technology as available as possible to project participants.

Peripherals have not yet been determined beyond a figure that represents the top end of spending in this area. These peripherals include items such as network cards, RAM, cords, human interface devices, storage devices, and so forth.

In addition to technology for which grant funds will pay, the project makes use of Open Source software and donated laptops as no-cost means to supplement technology in the classrooms.

Indirect Costs

Capital University will be administering this grant project and will have expenses related to that administration.

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Budget

Category	Item	Cost	Quantity	Total
Personnel				
	Faculty \$20/hr, 300 hrs	6000	3	18000
	Pre-service teacher research assistants \$20/hr 12 hrs	240	50	12000
	Teacher research assistants \$20/hr 30 hrs	600	15	9000
Professional Development				
	Workshop development	300	10	3000
	Copies, blank dvds and cdROMs, etc.	100	10	1000
Technology				
	Clicker systems	1000	2	2000
	IWBs and accessories	2000	2	4000
	LCD projectors	500	6	3000
	Mobile devices	500	60	30000
	Digital cameras	100	30	3000
	Video cameras	300	3	900
	Peripherals			4100
Indirect costs				10000
Total Cost of Project				100000

APPENDIX A: MOU EXECUTION FORM

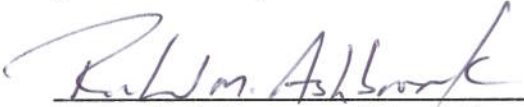
This Memorandum of Understanding (MOU), which results from the **Teacher Planning Grant RFP**, is between **eTech Ohio Commission** ("etech POhio"), located at 35 E. Chestnut Street, 8th Fl. Columbus, OH 43215 and **Capital University**, ("Grant Awardee"), whose address is 1 College and Main, Columbus, Ohio 43209.

If this Request for Proposals (RFP) results in a grant award; the MOU will consist of this RFP including all attachments, written amendments, and any materials incorporated by reference in the above documents. The form of the MOU is this one-page attachment to the RFP, which incorporates by reference all the documents identified above as if fully written and incorporated herein. The General Terms and Conditions for the Contract are contained in the RFP and full incorporated herein.

This MOU has an effective date of the later of the dates all parties have executed this agreement.

IN WITNESS WHEREOF, the parties have executed this MOU by their authorized officers as of the last date set aside their respective signatures.

Capital University
(Grant Awardee)


(Authorized Signature of the College or University)

Richard M. Ashbrook
(Printed Name)

Provost and Vice President of Academic Affairs
(Title)

3/25/11
(Date)

eTech Ohio Commission
(State of Ohio Agency)

(Signature)

Kathleen T. Harkin
(Printed Name)

Executive Director
(Title)

(Date)